

IN THE DRAWINGS

The attached sheet of drawings includes changes to Figures 1 and 2. This sheet, which includes Figures 1 and 2, replaces the original sheet including Figures 1 and 2.

Figure 1 has been designated with the legend --Prior Art-. In Figure 2, reference numeral --2-- has been added.

Attachment: Replacement Sheet

REMARKS

Claims 59-65, 67-78, and 80-83 remain pending in this application. Claims 59-65, 67-69, 72-78, and 80 have been amended. Claims 66, 79, and 84-86 have been cancelled without prejudice or disclaimer of subject matter. Claims 59 and 72 are independent.

At paragraphs 1-5 of the Office Action, the drawings were objected to for the reasons given therein. In response, Applicant has labelled Fig. 1 as --Prior Art--, as required. Applicant has also added reference numeral --2-- to Fig. 2, so that it is more clear that Fig. 2 shows the melody transcription device 2 described in the specification. Submitted herewith is a replacement sheet of drawing including amended Figs. 1 and 2. No new matter has been added. Entry of the replacement sheet of drawing is respectfully requested.

At paragraphs 6-10 of the Office Action, the drawings were objected to as failing to comply with 37 C.F.R. 1.84(p)(5), for including reference numerals 906 (Fig. 10), 1115 (Fig. 12), and 1222/1224 (Fig. 13) not mentioned in the specification. Applicants have amended the specification herein to refer to those reference numerals. No new matter has been added.

For all the foregoing reasons, withdrawal of the objection to the drawings is respectfully requested.

At paragraphs 11-13 of the Office Action, the specification was objected to for the reasons given therein. In response, Applicants have carefully reviewed and amended the specification to describe 1216 and 1217, as required. Accordingly, withdrawal of the objection to the specification is respectfully requested.

Claims 63 and 84-86 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

First, cancellation of claims 84-86 renders the rejections of those claims moot.

Claim 63 has been carefully reviewed and amended as deemed necessary to ensure that it conforms fully to the requirements of Section 112, second paragraph, with special attention to the points raised in paragraph 16 of the Office Action. It is believed that the rejection under Section 112, second paragraph, has been obviated, and its withdrawal is therefore respectfully requested.

Claims 84-86 were rejected under 35 U.S.C. § 101, for being directed to non-statutory subject matter. Cancellation of claims 84-86 renders the rejections of those claims moot.

Claims 59-83 were rejected under 35 U.S.C. §§ 102(e) as being anticipated by U.S. Patent Application Publication No. US 2005/0086052 to Shih.

First, cancellation of claims 66, 79, and 84-86 renders the rejections of those claims moot.

Applicants submit that independent claims 59 and 72, together with the claims dependent therefrom, are patentably distinct from the cited reference for at least the following reasons.

Claim 59 is directed to a method for detecting the pitch values of notes in a musical sound signal. The method includes identifying one or more voiced segments in the sound signal using an energy function of the sound signal, applying a gradient-based processing to the voiced segments for dividing each voiced segment into one or more notes, and deriving pitch values of the respective notes in the sound signal.

Shih, as understood by Applicants, relates to a humming transcription system and methodology. More particularly, the method discussed in Shih requires a special humming signal comprising "stop consonant - vowel" syllables (see paragraph [0028]). In Shih, the humming signal is divided using an energy measure to segment the notes within the humming piece by defining the boundaries of the notes in order to obtain the duration contour of the humming signal (see paragraph [0036]).

Notably, and with reference to Figure 3 of Shih, each of the identified segments in the energy measure is assumed to be representative of only one note, which is why there is a requirement for the "stop consonant - vowel" basic sound in Shih. This is explicitly described in paragraph [0037] and as shown in Figure 3 of Shih.

In contrast, claim 59 recites that after voiced segments in the sound signal are identified using an energy function of the sound signal, a gradient-based processing is applied to the voiced segments for dividing each voiced segment into one or more notes. Applicants respectfully submit that Shih fails to teach or suggest at least applying a gradient-based processing to the voiced segments for dividing each voiced segment into one or more notes, as recited in claim 59.

Accordingly, claim 59 is seen to be clearly allowable over Shih.

Independent claim 72 recited features which are similar in many relevant respects to those discussed above in connection with claim 59. Accordingly, claim 72 is believed to be patentable over Shih for at least the same reasons as discussed above in connection with Claim 59.

The other claims in this application are each dependent from one or the other of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration or reconsideration, as the case may be, of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Respectfully submitted,

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